

AR



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,607	02/24/2004	Avi Ashkenazi	P1216R1C1D5	3220
35489	7590	09/22/2005	EXAMINER	
HELLER EHRMAN LLP 275 MIDDLEFIELD ROAD MENLO PARK, CA 94025-3506			HADDAD, MAHER M	
			ART UNIT	PAPER NUMBER
			1644	
DATE MAILED: 09/22/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/785,607

Applicant(s)

ASHKENAZI ET AL.

Examiner

Maher M. Haddad

Art Unit

1644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 54,55 and 57-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 54-55 and 57-59 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/19/05</u> | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet.</u> |

500

Continuation of Attachment(s) 6). Other: RAW SEQUENCE LISTING ERROR REPORT and Notice to Comply with Requirements for Nucleotide sequence and/or amino acid sequence.

DETAILED ACTION

1. Applicant's amendment, filed 7/15/05, is acknowledged.
2. Claims 54-55 and 57-59 are pending and allowed.
3. The amendment filed 7/15/05 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The preliminary amendment filed on 7/15/05 to the sequence listing substituting of Figure 5 (SEQ ID NO: 11) with the current SEQ ID NO: 11 represents a departure from the specification and the claims as originally filed. Applicant points out that there was an error in previous sequence listing in that, the sequence rightly submitted as SEQ ID NO: 7 was erroneously further repeated as SEQ ID NO:11. Applicant additionally found that Figure 5, as filed with the present application, lacks certain N-terminal nucleotides which have been covered by the designation "SEQ ID NO:11.". Applicant contends that the entire nucleotide sequence of Figure 5 was properly shown in Figure 5 of provisional application 60/109,304, the entire disclosure of which has been incorporated by reference into present application. Applicant submits that the present submission of the correct complete sequence does not constitute new matter. However, Applicant fails to point to the specification for support that Figure 5 of provisional application 60/109,304, the entire disclosure of which has been incorporated by reference into the present application. The Examiner did not find such support in the specification as originally filed. SEQ ID NO: 11 now lists a nucleic acid that is different with respect to its N-terminal nucleotides than the one depicted in original Figure 5. The specification and the claims as originally filed have no support for the new sequence listed in SEQ ID NO: 11.

Further, the drawing filed on 7/11/05 is objected to by the Examiner as it contain a new matter. The new Fig. 5 does not correspond to the original Fig. 5 since the new Fig. 5 N-terminal nucleotides are different from the original N-terminal nucleotides.

Applicant is required to cancel the new matter in the response to this Office action.

4. The specification is objected to because the brief figure description of Fig. 5 now shows the nucleotide sequence of SEQ ID NO: 11 which does not correspond to the nucleotide sequence of the native sequence DNA40628 as originally disclosed.
5. Sequence compliance: This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence.


Art Unit: 1644

The substitute Sequence Listing filed on 7/11/05, is flawed and therefore not entered into the USPTO database. Please see the attached Raw Sequence Listing Error Report. Correction is required.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maher Haddad whose telephone number is (571) 272-0845. The examiner can normally be reached Monday through Friday from 7:30 am to 4:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maher Haddad, Ph.D.
Patent Examiner
September 19, 2005


CHRISTINA CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- ☒ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☒ 7. Other: See attachment.

Applicant Must Provide:

- ☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216

For CRF Submission Help, call (703) 308-4212

For PatentIn software help, call (703) 308-6856

PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING
ERROR REPORT

BEST AVAILABLE COPY

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/785,607A
Source: IFW/6
Date Processed by STIC: 7/15/05

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebe/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER:

10/285,607A

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 **Wrapped Nucleics**
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 **Invalid Line Length** The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 **Misaligned Amino**
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 **Non-ASCII** The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 **Variable Length** Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 **PatentIn 2.0**
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 **Skipped Sequences**
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped
- Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 **Skipped Sequences**
 (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
 <210> sequence id number
 <400> sequence id number
 000
- 9 **Use of n's or Xaa's**
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
 In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 **Invalid <213>**
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 **Use of <220>**
 ~~Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.~~
 ~~Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.~~
 ~~(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)~~
- 12 **PatentIn 2.0**
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 **Misuse of n/Xaa** "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid



IFW16

RAW SEQUENCE LISTING

DATE: 07/15/2005

PATENT APPLICATION: US/10/785,607A

TIME: 11:09:25

Input Set : A:\39780-1216R1C1D5 SAVED JULY 7 2005.TXT

Output Set: N:\CRF4\07152005\J785607A.raw

4 <110> APPLICANT: Ashkenazi, Avi J.
 5 Fong, Sherman
 6 Goddard, Audrey
 7 Gurney, Austin L.
 8 Napier, Mary A.
 9 Tumas, Daniel
 10 Wood, William I.
 12 <120> TITLE OF INVENTION: COMPOUNDS, COMPOSITIONS AND METHODS FOR
 13 THE TREATMENT OF DISEASES CHARACTERIZED BY A-33 RELATED
 14 ANTIGENS
 16 <130> FILE REFERENCE: 39780-1216R1C1D5
 18 <140> CURRENT APPLICATION NUMBER: US 10/785,607A
 19 <141> CURRENT FILING DATE: 2004-02-24
 21 <150> PRIOR APPLICATION NUMBER: US 09/953,499
 22 <151> PRIOR FILING DATE: 2001-09-14
 24 <150> PRIOR APPLICATION NUMBER: US 09/254,465
 25 <151> PRIOR FILING DATE: 1999-03-05
 27 <150> PRIOR APPLICATION NUMBER: PCT/US98/24855
 28 <151> PRIOR FILING DATE: 1998-11-20
 30 <150> PRIOR APPLICATION NUMBER: PCT/US98/19437
 31 <151> PRIOR FILING DATE: 1998-09-17
 33 <160> NUMBER OF SEQ ID NOS: 30
 35 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 37 <210> SEQ ID NO: 1
 38 <211> LENGTH: 299
 39 <212> TYPE: PRT
 40 <213> ORGANISM: Homo sapiens
 42 <400> SEQUENCE: 1
 43 Met Gly Thr Lys Ala Gln Val Glu Arg Lys Leu Leu Cys Leu Phe Ile
 44 1 5 10 15
 45 Leu Ala Ile Leu Leu Cys Ser Leu Ala Leu Gly Ser Val Thr Val His
 46 20 25 30
 47 Ser Ser Glu Pro Glu Val Arg Ile Pro Glu Asn Asn Pro Val Lys Leu
 48 35 40 45
 49 Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe
 50 50 55 60
 51 Asp Gln Gly Asp Thr Thr Arg Leu Val Cys Tyr Asn Asn Lys Ile Thr
 52 65 70 75 80
 53 Ala Ser Tyr Glu Asp Arg Val Thr Phe Leu Pro Thr Gly Ile Thr Phe
 54 85 90 95
 55 Lys Ser Val Thr Arg Glu Asp Thr Gly Thr Tyr Thr Cys Met Val Ser
 56 100 105 110
 57 Glu Glu Gly Gly Asn Ser Tyr Gly Glu Val Lys Val Lys Leu Ile Val

Does Not Comply
Corrected Diskette Needed

pp 3-4

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/785,607A

DATE: 07/15/2005

TIME: 11:09:25

Input Set : A:\39780-1216R1C1D5 SAVED JULY 7 2005.TXT

Output Set: N:\CRF4\07152005\J785607A.raw

```

58          115          120          125
59 Leu Val Pro Pro Ser Lys Pro Thr Val Asn Ile Pro Ser Ser Ala Thr
60          130          135          140
61 Ile Gly Asn Arg Ala Val Leu Thr Cys Ser Glu Gln Asp Gly Ser Pro
62 145          150          155          160
63 Pro Ser Glu Tyr Thr Trp Phe Lys Asp Gly Ile Val Met Pro Thr Asn
64          165          170          175
65 Pro Lys Ser Thr Arg Ala Phe Ser Asn Ser Ser Tyr Val Leu Asn Pro
66          180          185          190
67 Thr Thr Gly Glu Leu Val Phe Asp Pro Leu Ser Ala Ser Asp Thr Gly
68          195          200          205
69 Glu Tyr Ser Cys Glu Ala Arg Asn Gly Tyr Gly Thr Pro Met Thr Ser
70          210          215          220
71 Asn Ala Val Arg Met Glu Ala Val Glu Arg Asn Val Gly Val Ile Val
72 225          230          235          240
73 Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Ile Leu Val Phe Gly
74          245          250          255
75 Ile Trp Phe Ala Tyr Ser Arg Gly His Phe Asp Arg Thr Lys Lys Gly
76          260          265          270
77 Thr Ser Ser Lys Lys Val Ile Tyr Ser Gln Pro Ser Ala Arg Ser Glu
78          275          280          285
79 Gly Glu Phe Lys Gln Thr Ser Ser Phe Leu Val
80          290          295
83 <210> SEQ ID NO: 2
84 <211> LENGTH: 321
85 <212> TYPE: PRT
86 <213> ORGANISM: Homo sapiens
88 <400> SEQUENCE: 2
89 Met Gly Ile Leu Leu Gly Leu Leu Leu Leu Gly His Leu Thr Val Asp
90 1          5          10          15
91 Thr Tyr Gly Arg Pro Ile Leu Glu Val Pro Glu Ser Val Thr Gly Pro
92          20          25          30
93 Trp Lys Gly Asp Val Asn Leu Pro Cys Thr Tyr Asp Pro Leu Gln Gly
94          35          40          45
95 Tyr Thr Gln Val Leu Val Lys Trp Leu Val Gln Arg Gly Ser Asp Pro
96          50          55          60
97 Val Thr Ile Phe Leu Arg Asp Ser Ser Gly Asp His Ile Gln Gln Ala
98 65          70          75          80
99 Lys Tyr Gln Gly Arg Leu His Val Ser His Lys Val Pro Gly Asp Val
100          85          90          95
101 Ser Leu Gln Leu Ser Thr Leu Glu Met Asp Asp Arg Ser His Tyr Thr
102          100          105          110
103 Cys Glu Val Thr Trp Gln Thr Pro Asp Gly Asn Gln Val Val Arg Asp
104          115          120          125
105 Lys Ile Thr Glu Leu Arg Val Gln Lys Leu Ser Val Ser Lys Pro Thr
106          130          135          140
107 Val Thr Thr Gly Ser Gly Tyr Gly Phe Thr Val Pro Gln Gly Met Arg
108 145          150          155          160
109 Ile Ser Leu Gln Cys Gln Ala Arg Gly Ser Pro Pro Ile Ser Tyr Ile

```

RAW SEQUENCE LISTING

DATE: 07/15/2005

PATENT APPLICATION: US/10/785,607A

TIME: 11:09:25

Input Set : A:\39780-1216R1C1D5 SAVED JULY 7 2005.TXT

Output Set: N:\CRF4\07152005\J785607A.raw

```

110                               165                               170                               175
111 Trp Tyr Lys Gln Gln Thr Asn Asn Gln Glu Pro Ile Lys Val Ala Thr
112                               180                               185                               190
113 Leu Ser Thr Leu Leu Phe Lys Pro Ala Val Ile Ala Asp Ser Gly Ser
114                               195                               200                               205
115 Tyr Phe Cys Thr Ala Lys Gly Gln Val Gly Ser Glu Gln His Ser Asp
116                               210                               215                               220
117 Ile Val Lys Phe Val Val Lys Asp Ser Ser Lys Leu Leu Lys Thr Lys
118 225                               230                               235                               240
119 Thr Glu Ala Pro Thr Thr Met Thr Tyr Pro Leu Lys Ala Thr Ser Thr
120                               245                               250                               255
121 Val Lys Gln Ser Trp Asp Trp Thr Thr Asp Met Asp Gly Tyr Leu Gly
122                               260                               265                               270
123 Glu Thr Ser Ala Gly Pro Gly Lys Ser Leu Pro Val Phe Ala Ile Ile
124                               275                               280                               285
125 Leu Ile Ile Ser Leu Cys Cys Met Val Val Phe Thr Met Ala Tyr Ile
126                               290                               295                               300
127 Met Leu Cys Arg Lys Thr Ser Gln Gln Glu His Val Tyr Glu Ala Ala
128 305                               310                               315                               320
129 Arg
133 <210> SEQ ID NO: 3
134 <211> LENGTH: 390
135 <212> TYPE: DNA
136 <213> ORGANISM: Artificial Sequence
138 <220> FEATURE:
139 <223> OTHER INFORMATION: Artificial sequence
141 <400> SEQUENCE: 3
142 cttcttgcca actggtatca cttcaagtc cgtgacacgg gaagacactg ggacatacac 60
143 ttgtatggc tctgaggaag gcggcaacag ctatggggag gtcaagggtca agtcacatcgt 120
144 gcttgtgcct ccaccaagc ctacagttaa catccctcc tctgccacca ttgggaaccg 180
145 ggcagtgtg acatgctcag aacaagatgg ttccccacct tctgaataca cctggttcaa 240
146 agatgggata gtgatgccta cgaatcccaa aagcaccctg gccttcagca actcttccta 300
147 tgtcctgaat ccacaacag gagagctggt ctttgatccc ctgtcagcct ctgatactgg 360
148 agaatacagc tgtgaggcac ggaatgggta
150 <210> SEQ ID NO: 4
151 <211> LENGTH: 726
152 <212> TYPE: DNA
153 <213> ORGANISM: Artificial Sequence
155 <220> FEATURE:
156 <223> OTHER INFORMATION: Artificial sequence
158 <400> SEQUENCE: 4
159 tctcagtcct ctcgtgtag tgcggagct gtgttctgtt tcccaggagt ccttcggcgg 60
160 ctgttgtgct caggtgcgcc tgatcgcgat ggggacaaag gcgcaagctc gagaggaaac 120
161 ttgtgtgcct cttcatattg gcgatcctgt tgtgtccct ggcattgggc agtggttacag 180
162 ttgcactcct ctgaacctga agtcagaatt cctgagaata atcctgtgaa gttgtcctgt 240
163 gcctactcgg gcttttcttc tcccgtgtg gagtggaagt ttgaccaagg agacaccacc 300
164 agactcgttt gctataataa caagatcaca gcttcctatg aggaccgggt gaccttcttg 360
165 ccaactggta tcaccttcaa gtccgtgaca cgggaagaca ctgggacata cacttgtatg 420
166 gtctctgagg aaggcggaag cagctatggg gaggtcaagg tcaagctcat cgtgcttgtg 480

```

insufficient explanation - give source of genetic material (see item 11 on Enon. summary sheet)

same enon

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/785,607A

DATE: 07/15/2005

TIME: 11:09:25

Input Set : A:\39780-1216R1C1D5 SAVED JULY 7 2005.TXT

Output Set: N:\CRF4\07152005\J785607A.raw

167 cctccatcca agcctacagt taacatcccc tcctctgccca ccattgggaa cggggcagtg 540
 168 ctgacatgct cagaacaaga tggttcccca cttctgaat acacctggtt caaagatggg 600
 169 atagtgatgc ctacgaatcc caaaagcacc cgtgccttca gcaactcttc ctatgtcctg 660
 170 aatcccacaa caggagagct ggtctttgat cccctgtcag cctctgatac tggagaatac 720
 171 agctgt 726

173 <210> SEQ ID NO: 5

174 <211> LENGTH: 1503

175 <212> TYPE: DNA

176 <213> ORGANISM: Artificial Sequence

178 <220> FEATURE:

179 <223> OTHER INFORMATION: Artificial sequence

181 <400> SEQUENCE: 5

182 gcaggcaaaag taccagggcc gcctgcatgt gagccacaag gttccaggag atgtatccct 60
 183 ccaattgagc accctggaga tggatgaccg gagccactac acgtgtgaag tcacctggca 120
 184 gactcctgat ggcaaccaag tcgtgagaga taagattact gagctccgtg tccagaaact 180
 185 ctctgtctcc aagcccacag tgacaactgg cagcggttat ggcttcacgg tgccccaggg 240
 186 aatgaggatt agccttcaat gccaggggtc ggggttctcc tcccatcagt tatatttgg 300
 187 ataagcaaca gactaataac cagggaaccc atcaaagtag caaccctaag taccttactc 360
 188 ttcaagcctg cggatgagc cgactcaggc tcctatttct gcaactgcaa gggccaggtt 420
 189 ggctctgagc agcacagcga cattgtgaag tttgtggtca aagactcctc aaagtactc 480
 190 aagaccaaga ctgaggcacc tacaacctg acatacccct tgaaagcaac atctacagt 540
 191 aagcagtcct gggactggac cactgacatg gatggctacc ttggagagac cagtgtctgg 600
 192 ccaggaaaga ggcctgctgt ctttgccatc atcctcatca tctccttggt ctgtatggtg 660
 193 gttttttacca tggcctatat catgctctgt cggaagacat cccaacaaga gcatgtctac 720
 194 gaagcagcca gggcacatgc cagagaggcc aacgactctg gagaaaccat gaggggtggc 780
 195 atcttcgcaa gtggctgctc cagtgtatgag ccaacttccc agaactctgg gcaacaacta 840
 196 ctctgatgag cctgcatag gacaggagta ccagatcatc gccagatca atggcaacta 900
 197 cgcccgctg ctggacacag ttcctctgga ttatgagtt ctggccactg agggcaaaag 960
 198 tgtctgttaa aaatgcccc ttaggccagg atctgtgtac ataattgcct agtcagtcct 1020
 199 tgccctctgc atggccttct tcctgtctac ctctcttctt ggatagcccc aagtgtccgc 1080
 200 ctaccaacac tggagccgct gggagtcact ggctttgccc tggaaattgc cagatgcac 1140
 201 tcaagtaagc cagctgtctg atttggtctt gggcccttct agtatctctg ccgggggctt 1200
 202 ctgggtactcc tctctaaata ccagagggaa gatgccata gcactaggac ttgggtcatca 1260
 203 tgccctacaga cactattcaa ctttggcatc ttgccaccag aagacccgag gggaggctca 1320
 204 gctctgccag ctgagaggac cagctatctc caggatcatt tctctttctt caggggccaga 1380
 205 cagcttttaa ttgaaattgt tatttcacag gccaggggtc agttctgtct ctcactata 1440
 206 agtctaattgt tctgactctc tcctggtgct caataaatat ctaatcataa cagcaaaaaa 1500
 207 aaa 1503

209 <210> SEQ ID NO: 6

210 <211> LENGTH: 319

211 <212> TYPE: PRT

212 <213> ORGANISM: Homo sapiens

214 <400> SEQUENCE: 6

215 Met Val Gly Lys Met Trp Pro Val Leu Trp Thr Leu Cys Ala Val Arg
 216 1 5 10 15
 217 Val Thr Val Asp Ala Ile Ser Val Glu Thr Pro Gln Asp Val Leu Arg
 218 20 25 30
 219 Ala Ser Gln Gly Lys Ser Val Thr Leu Pro Cys Thr Tyr His Thr Ser
 220 35 40 45

*This error appears in
 subsequent sequences, too.*

RAW SEQUENCE LISTING

DATE: 07/15/2005

PATENT APPLICATION: US/10/785,607A

TIME: 11:09:25

Input Set : A:\39780-1216R1C1D5 SAVED JULY 7 2005.TXT

Output Set: N:\CRF4\07152005\J785607A.raw

```

221 Thr Ser Ser Arg Glu Gly Leu Ile Gln Trp Asp Lys Leu Leu Leu Thr
222      50                      55                      60
223 His Thr Glu Arg Val Val Ile Trp Pro Phe Ser Asn Lys Asn Tyr Ile
224 65                      70                      75                      80
225 His Gly Glu Leu Tyr Lys Asn Arg Val Ser Ile Ser Asn Asn Ala Glu
226                      85                      90                      95
227 Gln Ser Asp Ala Ser Ile Thr Ile Asp Gln Leu Thr Met Ala Asp Asn
228                      100                     105                     110
229 Gly Thr Tyr Glu Cys Ser Val Ser Leu Met Ser Asp Leu Glu Gly Asn
230                      115                     120                     125
231 Thr Lys Ser Arg Val Arg Leu Leu Val Leu Val Pro Pro Ser Lys Pro
232      130                      135                      140
233 Glu Cys Gly Ile Glu Gly Glu Thr Ile Ile Gly Asn Asn Ile Gln Leu
234 145                      150                      155                      160
235 Thr Cys Gln Ser Lys Glu Gly Ser Pro Thr Pro Gln Tyr Ser Trp Lys
236                      165                      170                      175
237 Arg Tyr Asn Ile Leu Asn Gln Glu Gln Pro Leu Ala Gln Pro Ala Ser
238                      180                      185                      190
239 Gly Gln Pro Val Ser Leu Lys Asn Ile Ser Thr Asp Thr Ser Gly Tyr
240                      195                     200                     205
241 Tyr Ile Cys Thr Ser Ser Asn Glu Glu Gly Thr Gln Phe Cys Asn Ile
242      210                      215                      220
243 Thr Val Ala Val Arg Ser Pro Ser Met Asn Val Ala Leu Tyr Val Gly
244 225                      230                      235                      240
245 Ile Ala Val Gly Val Val Ala Ala Leu Ile Ile Ile Gly Ile Ile Ile
246                      245                      250                      255
247 Tyr Cys Cys Cys Cys Arg Gly Lys Asp Asp Asn Thr Glu Asp Lys Glu
248                      260                     265                     270
249 Asp Ala Arg Pro Asn Arg Glu Ala Tyr Glu Glu Pro Pro Glu Gln Leu
250                      275                     280                     285
251 Arg Glu Leu Ser Arg Glu Arg Glu Glu Glu Asp Asp Tyr Arg Gln Glu
252      290                      295                      300
253 Glu Gln Arg Ser Thr Gly Arg Glu Ser Pro Asp His Leu Asp Gln
254 305                      310                      315
257 <210> SEQ ID NO: 7
258 <211> LENGTH: 2181
259 <212> TYPE: DNA
260 <213> ORGANISM: Homo sapiens
262 <400> SEQUENCE: 7
263 cccacgcgtc cgccacgcg tccgcccacg ggtccgccca cgcgtccggg ccaccagaag 60
264 tttgagcctc tttggtagca ggaggctgga agaaaggaca gaagtagctc tggctgtgat 120
265 ggggatctta ctgggcctgc tactcctggg gcacctaaac gtggacactt atggccgtcc 180
266 catcctggaa gtgccagaga gtgtaacagg accttggaac ggggatgtga atcttccttg 240
267 cacctatgac cccctgcaag gctacacca agtcttggtg aagtggctgg tacaacgtgg 300
268 ctacagacct gtcaccatct ttctacgtga ctcttctgga gaccatatcc agcaggcaaa 360
269 gtaccagggc cgcctgcattg tgagccacaa ggttcaggga gatgtatccc tccaattgag 420
270 caccctggag atggatgacc ggagccacta cacgtgtgaa gtcacctggc agactcctga 480
271 tggcaaccaa gtcgtgagag ataagattac tgagctccgt gtccagaaac tctctgtctc 540
272 caagcccaca gtgacaactg gcagcgggta tggcttcacg gtgccccagg gaatgaggat 600

```

VERIFICATION SUMMARY

DATE: 07/15/2005

PATENT APPLICATION: US/10/785,607A

TIME: 11:09:26

Input Set : A:\39780-1216R1C1D5 SAVED JULY 7 2005.TXT

Output Set: N:\CRF4\07152005\J785607A.raw